WHAT IS CLAIMED IS:

1. A semiconductor laser element that exhibits self-sustained pulsation in a predetermined output region, said semiconductor laser element comprising:

a substrate;

a first conductive type clad layer formed on said substrate;

an active layer formed on said first conductive type clad layer for emitting light by current injection;

a second conductive type first clad layer formed on said active layer; and

a stripe-shaped second conductive type second clad layer formed on said second conductive type first clad layer in a first direction, in such a manner that the cross-sectional surface of said stripe-shaped second conductive type second clad layer in a direction perpendicular to said first direction has a shape having an upper edge and a lower edge that face each other and side edges that connect between said upper edge and said lower edge, where the minimum width thereof is at least 70% but no more than 100% of the maximum width.

2. The semiconductor laser device as defined by claim 1, wherein the shape of said cross-sectional surface of said stripe-shaped second conductive type second clad layer is any one of the following:

a shape such that the width of said upper edge is less than the width of said lower edge, and said side edges widen from said upper edge to said lower edge;

a shape such that the width of said upper edge is less than the width of said lower edge, and each of said side edges has an upper edge portion that descends substantially perpendicularly from said upper edge towards said lower edge and a lower edge portion that

extends from that upper end portion to said lower edge; and

a shape such that the width of said upper edge is less than the width of said lower edge, and each of said side edges has an upper side edge portion that descends in a manner that narrows inward from said upper edge towards said lower edge and a lower side edge portion that extends from that upper end portion to said lower edge.

3. The semiconductor laser device as defined by claim 1, wherein the shape of said cross-sectional surface of said stripe-shaped second conductive type second clad layer is any one of the following:

a shape such that the width of said upper edge is greater than the width of said lower edge, and each of said side edges narrows inward from said upper edge to said lower edge; and

a shape such that the width of said upper edge is greater than the width of said lower edge, and each of said side edges has an upper side edge portion that descends in a manner that narrows inward from said upper edge towards said lower edge and a lower side edge portion that extends from that upper edge portion to said lower edge.

4. The semiconductor laser device as defined by claim 1, wherein said cross-sectional surface of said stripe-shaped second conductive type second clad layer has a shape such that the width of said upper edge is equal to the width of said lower edge, and each of said side edges has an upper side edge portion that descends in a manner that narrows inward from said upper edge towards said lower edge and a lower side edge portion that extends from that upper edge portion to said lower edge.

5. The semiconductor laser device as defined by claim 1, wherein the width of said lower edge of said stripe-shaped second conductive type second clad layer is at least 3.0 μm.

6. The semiconductor laser device as defined by claim 1, wherein said active layer is formed of $Al_yGa_{1-y}As$ (where $0 \leq y \leq 0.2$) of a thickness at least 20 nm but no more than 60 nm.

7. The semiconductor laser device as defined by claim 6, wherein said stripe-shaped second conductive type second clad layer is formed of $In_{0.5}(Ga_{1-x}Al_x)_{0.5}P$ (where $0.6 \leq x \leq 1$).

8. The semiconductor laser device as defined by claim 1, wherein said active layer is formed of a stack of at least five but no more than nine alternate layers of well layers of $In_{0.5}(Ga_{1-u}Al_u)_{0.5}P$ (where $0 \leq u \leq 0.2$) and barrier layers of $In_{0.5}(Ga_{1-v}Al_v)_{0.5}P$ (where $0.2 < v \leq 0.6$), and the thickness of each well layer is at least 4 nm but no more than 8 nm.

9. The semiconductor laser device as defined by claim 1, wherein the angle between each of said side edges and said lower edge of said stripe-shaped second conductive type second clad layer is at least 70° but no more than 100° at a portion that is at least 60% of the upper side of said stripe-shaped second conductive type second clad layer.

10. A method of fabricating a semiconductor laser element that exhibits self-sustained pulsation in a predetermined output region, said method comprising the steps of:

forming a first conductive type clad layer on a substrate;

forming an active layer on said first conductive type clad layer;

forming a second conductive type first clad layer on said active layer;

forming a second conductive type second clad layer on said second conductive type first clad layer;

forming a stripe-shaped oxide film on said second conductive type second clad layer; and

using said oxide film as a mask to etch said second conductive type second clad layer to form a stripe-shaped second conductive type second clad layer; wherein:

an upper portion that is at least 60% of the top of said stripe-shaped second conductive type second clad layer is formed by dry etching; and

the cross-sectional surface of said stripe-shaped second conductive type second clad layer has an upper edge and a lower edge that face each other and side edges that connect between said first edge and said second edge, such that the minimum width thereof is at least 70% of the maximum width and the angle between said lower edge and each side edge of said upper portion is at least 70° but no more than 100°.

11. A multi-wavelength monolithic semiconductor laser device provided with an AlGaAs compound semiconductor laser element and an InGaAlP compound semiconductor laser element that are formed by using the same substrate, wherein:

said AlGaAs compound semiconductor laser element is a semiconductor laser element comprising:

a first conductive type clad layer;

an active layer formed on said first conductive type clad layer of $Al_yGa_{1-y}As$ (where $0 \leq y \leq 0.2$) for emitting light by current injection;

a second conductive type first clad layer formed on said active layer; and

a stripe-shaped second conductive type second clad layer formed of $In_{0.5}(Ga_{1-x}Al_x)_{0.5}P$ (where $0.6 \leq x \leq 1$) in a stripe shape on said second conductive type first clad layer in such a manner that the cross-sectional surface of said stripe-shaped second conductive type second clad layer has a shape having an upper edge and a lower edge that face each other and side edges that connect between said upper edge and said lower edge, where the minimum width thereof is at least 70% but no more than 100% of the maximum width;

and said InGaAlP compound semiconductor laser element is a semiconductor laser element comprising:

a first conductive type clad layer;

an active layer formed on said first conductive type clad layer of $In_{0.5}(Ga_{1-u}Al_u)_{0.5}P$;

a second conductive type first clad layer formed on said active layer; and

a stripe-shaped second conductive type second clad layer formed of an InGaAlP compound material of an equivalent composition to that of said stripe-shaped second conductive type second clad layer of said AlGaAs compound semiconductor laser element, said stripe-shaped second conductive type second clad layer formed in a stripe shape on said second conductive type first clad layer, in such a manner that the cross-sectional surface of said stripe-shaped second conductive type second clad layer has a shape having an upper edge and a lower edge that face each other and side edges that connect between said upper edge and said lower edge, where the minimum width thereof is at least 70% but no more than 100% of the maximum width;

wherein said InGaAlP compound semiconductor laser element emits light of a wavelength that differs from that of said AlGaAs compound semiconductor laser element.

12. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein:

said cross-sectional surface of said stripe-shaped second conductive type second clad layer of each of said AlGaAs compound semiconductor laser element and said InGaAlP compound semiconductor laser element has a shape such that the width of said upper edge is less than the width of said lower edge, and said side edges widen outward from said upper edge to said lower edge.

13. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein:

the width of said lower edge of said stripe-shaped second conductive type second clad layer of said AlGaAs compound semiconductor laser element is at least 3.0 μm;

the width of said lower edge of said stripe-shaped second conductive type second clad layer of said InGaAlP compound semiconductor laser element is at least 3.0 μm; and

said AlGaAs compound semiconductor laser element and said InGaAlP compound semiconductor laser element exhibit self-sustained pulsation in a predetermined output region.

14. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein said active layer of said AlGaAs compound semiconductor laser element is formed of $Al_yGa_{1-y}As$ (where $0 \leq y \leq 0.2$) of a thickness of at least 20 nm but no more than 60 nm.

15. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein: said active

layer of said InGaAlP compound semiconductor laser element is formed of a stack of at least five but no more than nine alternate layers of well layers of $In_{0.5}(Ga_{1-u}Al_u)_{0.5}P$ (where $0 \leq u \leq 0.2$) and barrier layers of $In_{0.5}(Ga_{1-v}Al_v)_{0.5}P$ (where $0.2 < v \leq 0.6$), and the thickness of each well layer is at least 4 nm but no more than 8 nm.

16. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein:

said second conductive type first clad layer of said InGaAlP compound semiconductor laser element is formed of $In_{0.5}(Ga_{1-t}Al_t)_{0.5}P$ (where $0.6 \leq t \leq 1$) of a thickness of at least 0.15 μm but no more than 0.45 μm; and

said second conductive type first clad layer of said AlGaAs compound semiconductor laser element is formed of an InGaAlP compound material of a composition equivalent to that of said second conductive type first clad layer of said InGaAlP compound semiconductor laser element, of a thickness of at least 0.15 μm but no more than 0.45 μm.

17. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein:

said InGaAlP compound semiconductor laser element further comprises a current-blocking layer formed of $In_{0.5}(Ga_{1-w}Al_w)_{0.5}P$ (where $0.7 \leq w \leq 1.0$) on both sides of said stripe-shaped second conductive type second semiconductor layer; and

said AlGaAs compound semiconductor laser element further comprises a current-blocking layer formed of an InGaAlP compound material of a composition equivalent to that of said current-blocking layer of said InGaAlP compound semiconductor laser element, on both sides of

said stripe-shaped second conductive type second semiconductor layer.

18. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein at least one of said InGaAlP compound semiconductor laser element and said AlGaAs compound semiconductor laser element further comprises a dielectric isolation film on both sides of said stripe-shaped second conductive type second semiconductor layer thereof.

19. The multi-wavelength monolithic semiconductor laser device as defined by claim 11, wherein in at least one of said InGaAlP compound semiconductor laser element and said AlGaAs compound semiconductor laser element, said stripe-shaped second conductive type second semiconductor layer has been formed in a stripe shape from an end surface on one side to an end surface on the other side, the width of said lower edge of said stripe-shaped second conductive type second semiconductor layer is wider at a central portion but narrower in the vicinity of the end surfaces thereof, and the width of said lower edge in the vicinity of said end surfaces is no more than 5.0 μm.